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Paper March 1824

On

W. S. H

Deard

Hepatitis

By

Eldred W. Mobley

of

Frederick Town

Maryland

Prof. Wm. H. Hall

Nov. 24

Dear Sir

My dear Sir

I have

received your letter of the 21st

and

am glad to hear

that you are

280  
William Bradby Esqr M, D.

This is respectfully dedicated,  
as but a small tribute for the many  
services he has rendered

The Author,

William Stanley of N. H.

that he might be satisfied

as to a small matter for the money

which he had lent

to the

The consideration of this disease has excited the pens of the most able men in the profession, and brought forth the exertions of others, in every respect well calculated to dispel the surrounding mists of the most intricate points, so as to render them comprehensible to the more ordinary capacities.

This need not excite our surprise when we reflect, on the importance of the organ and the extensive influence which it exerts over the human system, and that in the study of morbid anatomy we have the Liver so often exhibited, disorganized in structure and deranged in function—a slight review, also, of the diseases peculiar to the country in which we live, will enable us to ascertain, that this is not the least frequent affection, with which the Americans



Practitioner has to contend,

On this subject, I shall not pretend to offer any thing new. - such an attempt, in me, would be really absurd, particularly at this late period and after this subject has been so ably considered by such gentlemen, as above described,

Views of disease, unless founded on an intimate acquaintance with organization and functions; the effects of derangement and also the liability of one organ or part affecting another when diseased either from contiguity or sympathy, cannot possibly be correct, and will not in the generality of cases, conduct us to happy terminations, -

It may not, therefore, I am persuaded, be amiss to premise a short account





of the situation and structure of the Liver, the better to understand the opinions deduced therefrom, respecting the diseases to which derangement in its structure and function gives rise.

The Liver is the largest organ, and I may add, one of the most important glands, in the body, - in proportion to its size is its importance and connection extensive throughout the whole system, -

This important organ is found situated, principally, in the upper anterior and lateral part of the abdomen; occupying, completely, the right hypochondrium, the superior portion of the Epigastrie and a small part of the left hypochondriac regions, -

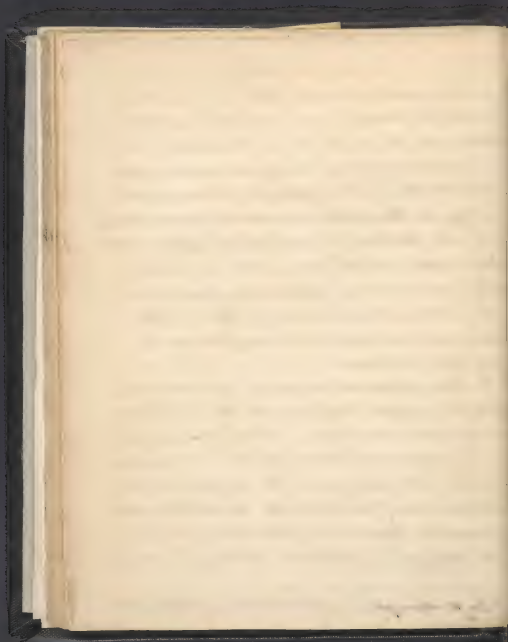
In the Fetus, the seat of the Liver is found to differ essentially, from that



of the adult, - In the Fetus it is observed to occupy more of the left side than of the right. About this time it is found occupying nearly as much of the left as the right hypochondrium; gradually, as the child advances in years, changing its position from left to right, until the fifth or sixth year, when it is seen situated as above described; from which it is not removed during life, unless diseased or under the influence of morbid action, -

The Liver is smooth, uniform and coarse, on its upper Surface; on the lower <sup>its</sup> =  
= flat and concave. - Its superior surface  
is in close contact with the convexity,  
of the Diaphragm. - Its margin, in the  
Thorax, is in contact with the abdominal  
muscles, because it falls lower than  
the margin of the ribs. Its inferior con =

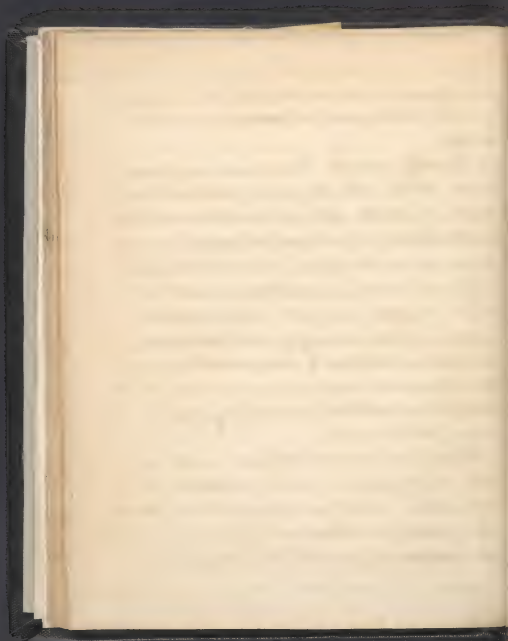
<sup>4</sup> See the description of the situation of the debtors.



coar surface vesiculae the coarser portions  
of the stomach, Duodenum and  
Colon.

A healthy adult Liver more extends  
lower than the margin of the ribs, ex-  
cept about the pit of the stomach; but  
in the Fetus, as already observed, it will  
be found quite different. About the third  
or fourth month, in the Fetus, it will be  
found to fill nearly the whole superior  
portion of the cavity of the abdomen.  
In short, it extends to the umbilicus, covers  
the stomach, and is in contact with  
the Spleen. It has two coats, viz, proper  
and peritoneal.

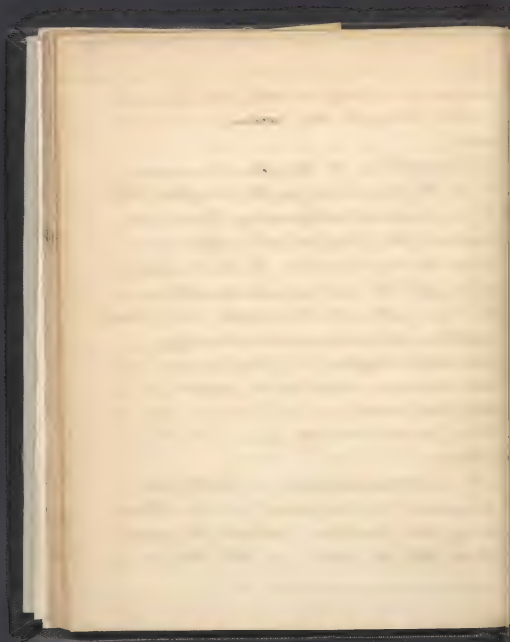
The Eighth month brings with it  
the development and growth of  
the other parts in proportion; about  
this time the Sternum begins to lengthen;  
the concavity of the Diaphragm is



increased; thereby, enabling the Liver to  
 reside beneath the ~~strings~~ <sup>ribs</sup> of the  
 ribs.

The reflection of the Peritonaeum  
 from the surrounding parts upon the  
 Liver forms its supporting ligaments,  
 however, the Liver is not retained in  
 its natural situation by those ligaments  
 alone, for the abdominal muscles, as is  
 the case with all the viscera contained  
 within the abdominal cavity, give  
 the chief support to that viscus. It  
 also receives additional support from  
 the Vena Cava, which receives two or  
 three veins directly from its sub-  
 stance.

The broad suspensory, or falciform  
 ligament is composed of two lam-  
 ina of Peritonaeum, which descends,  
 from the middle of the Diaphragm





and end of the Sternum, to the  
superior convex surface of the Liver;  
it is then reflected to each side,  
to form the upper smooth coat.

The round or umbilical ligament  
of the Liver is formed, by the de-  
generation of the coats of the um-  
bilical vein, which conveyed the  
fœtal blood from the placenta into  
the veins of the Liver and System  
of the Fœtus. It may be traced, in  
its passage from the umbilicus, along  
the peritonæum, into the duplicatures  
of the broad ligament, and into  
the Fossa umbilicalis.

The posterior surface of the Liver,  
where it is uncovered by the peri-  
tonæum, is in close contact with  
a portion of the Tendon of the  
Diaphragm; alike uncovered by



Peritoneum, around this place of contact, is reflected the peritoneum, and forms, what is called, the Coronary Ligament.

The peritoneum is reflected from the Diaphragm, to each side of the Liver, and forms its right and left lateral ligaments.

The posterior part of the right lobe of the Liver, is found in contact with the right kidney, while the left, lies on the lesser end of the Stomach.

The great arch of the Colon, passes immediately under the Liver and in contact with it and the Gall Bladder, the latter of which after death, gives it a yellow appearance, after death.

The commencement of the Duodenum, lies, also, in contact with the Gall



bladder; and is frequently, in like manner with the colon, found tinged with bile. This bowel continues its course under the right lobe of the Liver, until it makes its turn, at which place, it is in contact with the Kidney.

The degeneration of the umbilical Arteries, in the adult, the Ligamentum Teres, which, passing along the under concave Surface of the Liver, opposite to the broad Suspensory, on the upper convex Surface, forms the umbilical Vein. This fissure and the falciform Ligament, descending from the Diaphragm, divide the Liver, into its Two great right and left lobes.

There is running, across this fissure another, forming, with it right angles. This is called the Transverse fissure. It rep



gives all the principle vessels of the  
 Liver. In it, we see the Arteria Hepatica,  
 and Vena Portarum entering the Liver,  
 and the Hepatic duct, passing out.  
 Near the middle of this fissure we  
 observe two prominences, which have  
 received the appellation of Porta or  
 gates; hence, the name of Vena Portarum  
 has been given to this vein, which  
 supplies the Liver with ~~the~~ materials for  
 the secretion of bile. This vein divides  
 into two rectangular branches, which  
 constitute the Sinus of the Vena Por-  
 tarum, and occupies the chief part  
 of this fissure. These vessels, viz. Hepatic  
 Artery, Vena portae, and Biliary duct,  
 in common with Nerves and Absorbents,  
 are enveloped by cellular substance,  
 which receives a partial covering  
 from the Peritoneum, and is called





the Capsule of Glisson, and by him,  
it was supposed to possess muscularity.  
This cellular investment proceeds with  
these vessels throughout their various  
ramifications in the substance of  
of the Liver.

Besides the two great Lobes of the Liver,  
formed by the umbilical fissure and  
falciform ligament, there are several  
smaller ones. One of these, denominated  
the Lobulus Spigelii, is situated be-  
tween the posterior part of the Transverse  
fissure and the Vena Cava, belonging  
more particularly to the right side, it  
receives a small blood vessel from  
the Vena porta.

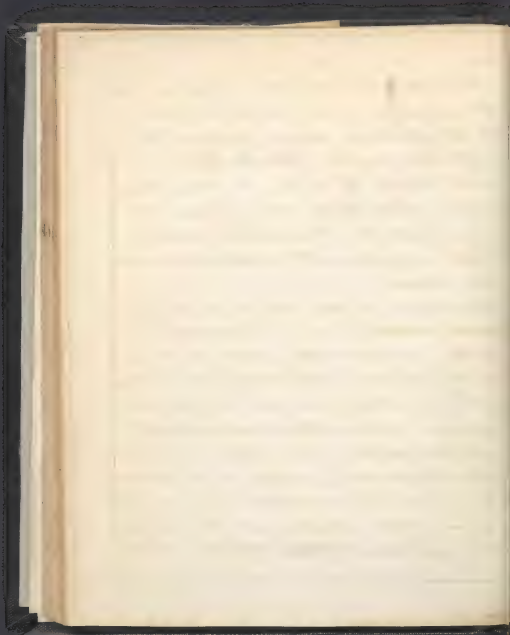
A process of the Lobulus Spigelii forms  
the Lobulus Caudatus.

The Lobulus Quartus or anonymous is  
found situated between the



umbilical fissure and the depression for the reception of the Gall bladder. On the posterior margin, between the left Lobe and the Lobulus Spigelii and right lobe of the Liver, is observed a sulcus, called the posterior fissure. It gives lodgment to the Ductus Venosus, which we find, in the adult, degenerated into a cord.

There is seen, in the Liver, a Fourth fissure, which is designed for the reception of the great ascending Cava, and is distinguished from the rest by the name of Fissura Vena Cava and is found passing between the Lobulus Spigelii and the posterior part of the right lobe. After the preceding remarks, we are naturally brought to the consideration of those blood vessels which go to the Liver. The first, and ~~one~~ of the most



important of which, is the Hepatic  
 artery. This is a very considerable branch  
 of the aorta, and as before suggested,  
 it penetrates the Liver at the great  
 Transverse fissure - previous to its division  
 and entrance into the Liver, it gives  
 off branches which go to supply  
 the Pyloric region of the Stomach,  
 the Duodenum and Pancreas; besides,  
 several small branches pass from it to the  
*Vena portae*. This artery communicates  
 with the Hepatic veins, Biliary duct,  
 and *Vena portarum*, as has been as-  
 certained, by injection. It rules the  
 Liver and ramifies minutely in its  
 substance.

The *Vena portarum*, which constitutes  
 the great peculiarity of the organ  
 now under consideration, enters the  
 Liver at its porta, enveloped in

At the division of the artery at the great fissure, the right branch, which enters  
 the right lobe of the Liver, is of course the largest. This branch sends off one to  
 the bladder which is called the *hypogastric*.  
 Mistaken tom 4. page 130 & Ibid.



Glisson's Capsule, in common with all  
 the vessels within that Sheath. This vessel  
 is composed of all those veins which  
 correspond to the Colicæ, the Superior  
 and inferior Mesenteric Arteries, ex-  
 cept those of the Hepatic artery. These  
 veins all unite, i. e. the great and Small  
 Mesenteric, the former consisting of those  
 veins which return the blood from the  
 Small Intestines, ~~also~~, of the Mid-  
 dle and right Colic veins, passing  
 over the Duodenum and posterior  
 to the Pancreas, it receives the great  
 Splenic veins which previously received  
 the contents of the Gastric = Pyloric and  
 Coronary veins, with the lower Mes-  
 enteric, which is composed of the  
 Internal Hemorrhoidal and left Colic  
 veins. These veins, as above stated,  
 unite into one common trunk, called





the Vena porta. This great trunk receives also the Pancreatic = duodenalis and Gastric veins.

Immediately, on the entrance of the Vena porta, into the Liver, it divides into two great branches which go off nearly at right angles, to form, what is called, the great Sinus of the Vena Portarum. The right branch of this division is the Shortest and largest; it divides into three smaller branches, which ramify minutely in the substance of the right lobe of the Liver. The left branch is considerably longer and proceeds to the extent of the great Sinus; near its end it is connected with the umbilical ligament, already mentioned. This branch, like the right, also ramifies minutely in the sub-

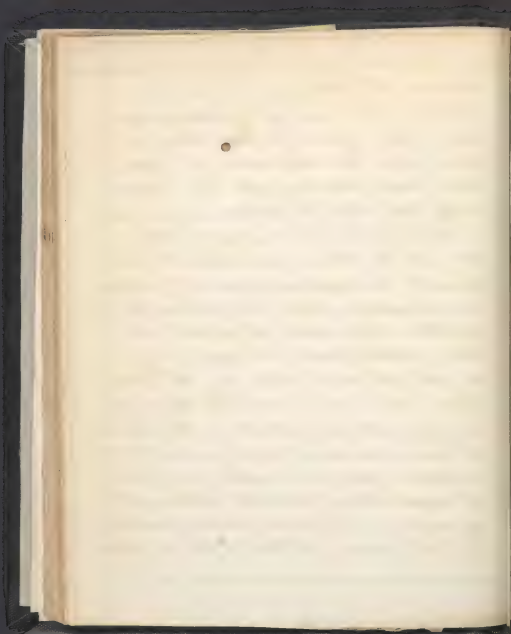


- Structure of the Liver.

The *Vena Portarum*, after taking upon itself the office of an artery, is conveying the materials for Secretion, and securing the bils. supplies itself into the *Vena Cava hepatica*.

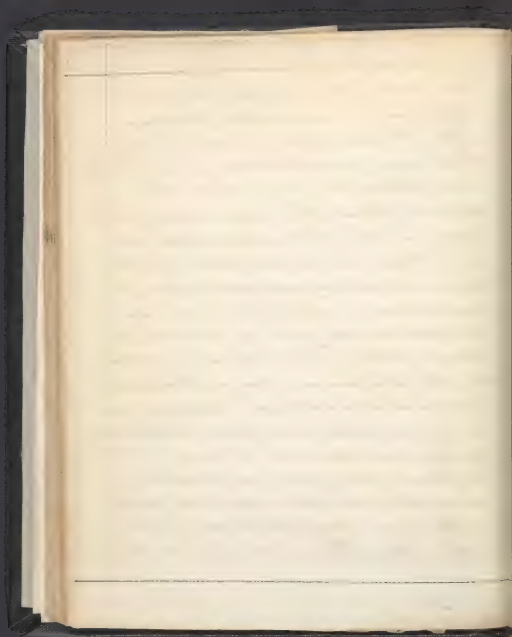
The *Porta biliaris* conveying the bile from the *Acini*, of which the Liver seems to be composed, gradually collect themselves into larger branches, until they unite themselves into two greater ones, corresponding to the different lobes of the Liver, these again unite, and <sup>form</sup> the *Hepatic* or great excretory duct of the Liver.

These three great vessels are situated in such a manner, with regard to each other, that the *Biliary* duct is anterior, the *Vena Porta* posterior, and the *Artery* to the left of them,



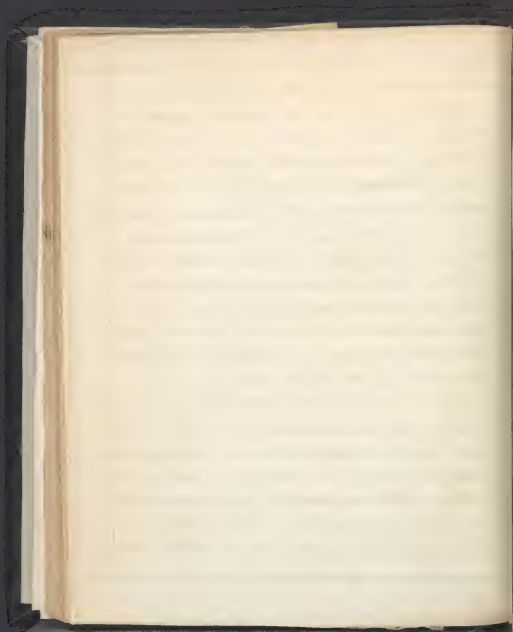
These Veins, which correspond to the Arteria Hepatica, and Vena Portarum, unite at the superior part of the Liver, and form the three great trunks. Sometimes but two, called the Hepatic Veins. These Veins empty themselves into the abdominal Cava. This great Vessel receives the blood of the Kidneys and inferior extremities; it runs up in a fissure, observed on the posterior Surface of the Liver, and immediately previous to its penetrating the Diaphragm, receives the Hepatic Veins. It is, sometimes, completely enveloped by the Liver, more particularly the Spigelian lobe.

The Nerves of the Liver are derived from the Semilunar Ganglions of the 6th of the great Sympathetic, or Inter-costal. These Ganglions furnish the



forms which form the Solar Plexus, from  
 this Plexus proceed a number of small  
 nervous threads which go to form the  
 network. innervated Hepatic Plexus.  
 These Plexuses, situated behind the Sto-  
 mach and above the Pancreas, completely  
 surround the Hepatic artery, and  
 Vein, Visc, and proceed with them  
 in their minute ramifications, through-  
 out the substance of the Liver. - They  
 are also accompanied by several nerv-  
 ous threads from the Stomachic Plexus,  
 formed by the Par vagus.

The Lymphatics of the Liver are ex-  
 tremely numerous, and have been di-  
 vided into deep seated and Superficial,  
 which freely communicate with each  
 other. The deep seated unite and enter  
 the Thoracic duct in the abdomen.  
 The Superficial unite and enter the



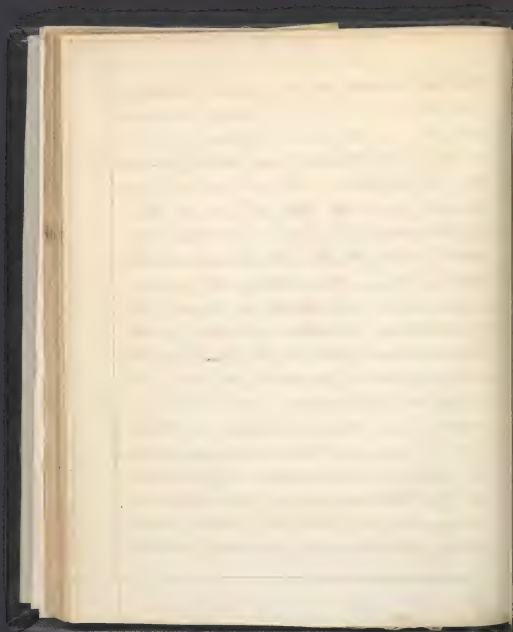


same, duct in the Thorax.

The intended limits of this essay, will not permit me to enter into the consideration of the minute structure of the Liver, nor do I consider it necessary, - suffice it to say, the Parenchyma of the Liver, when presented to view, exhibits the appearance of a reddish brown colour, and when cut into, a moderately firm consistence. On the concave surface of the right lobe of the Liver is observed a pit or depression, in which is situated the Gall bladder, which may be considered the common reservoir for the reception of the secretion of the Liver. It is of the shape of a Pear, and generally contains from one, to one and a half ounces of bile; it possesses a long, curved neck, bending in such a manner upon itself, as sometimes, when



The Gall Bladder is very much distended with bile, to form an acute angle, so, as to prevent the entire passage of its acrid fluid contents into the cystic duct; This is the canal through which passes the bile, from the Gall bladder to the hepatic duct. The union of these two ducts forms the Ductus Communis choleochus, larger than either of the former, and is about Three Inches in length. It proceeds through a small portion of the Pancreas and a little to the right of the Arteria hepatica, penetrates the muscular coat of the Duodenum, in which it proceeds from half to nearly an Inch before it pierces the villous coat, to open into the cavity of the Intestine. The peculiar route of this duct, prevents the retrograde movement of the bile. This duct when passing, the Pancreas generally receives



The duct from that Gland, in which case, the Hepatic and Pancreatic secretions become mixed in the common duct, and are discharged in that state, into the cavity of the Duodenum; in some instances, however, this is not the case. The Pancreatic duct entering the Duodenum by, a distinct orifice.

The bile, after being secreted by the Liver, is conveyed from that organ by, appropriate ducts to the Duodenum; where it is destined to effect a very sensible change upon the contents of the Intestines and to increase their natural peristaltic motion.

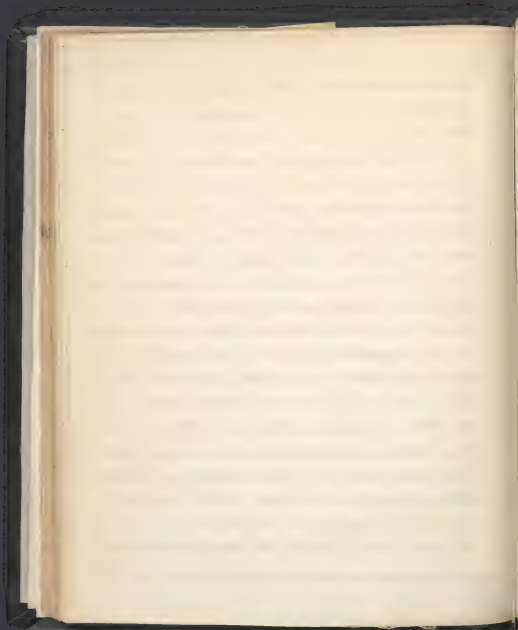
The bile is a viscid bitter fluid frequently varying, in colour, sometimes a greenish, but almost always of a brownish yellow; at other times it is without colour. To the indefatigable researches of Mr Thénard



and to Happiness, that prolific source  
 of improvement, we are indebted for a  
 knowledge of the constituents of human  
 bile. It is composed, as shown by Mr.  
 Thénard's experiments, of water, a yellow  
 insoluble matter, Albumen, Resin, Soda,  
 Phosphate of Soda and Lime, Sulphate and  
 Muriate of Soda and Oxide of Iron.

Nothing determinate has been ascertained  
 in regard to the nature of the Pancreatic  
 secretion. To the observations of Mr. Budge,  
 we are indebted for the only information  
 we possess respecting it. He found it to  
 be a colourless liquid, slightly saline. To  
 the latter, by evaporation Muriate of Soda  
 was obtained, and the same salt was  
 indicated also, by the Nitrate of Silver.  
 Hence, we may conclude it to be anal-  
 ogous in composition, to Saliva.

In accordance with the course we have

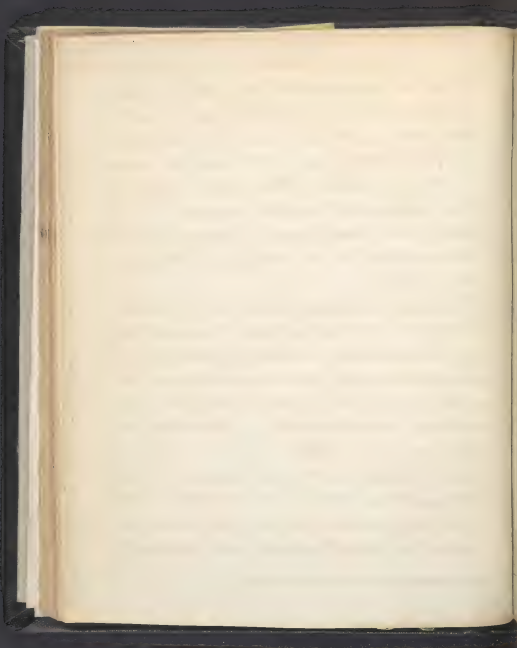




adopted, we are next brought to the consideration of those diseases which arise from a disordered state of the Liver, in which depend for their existence, upon a deranged state of that organ. In doing this, I shall not confine myself to any particular nosological arrangement, but treat of them in succession, as they may occur to me.

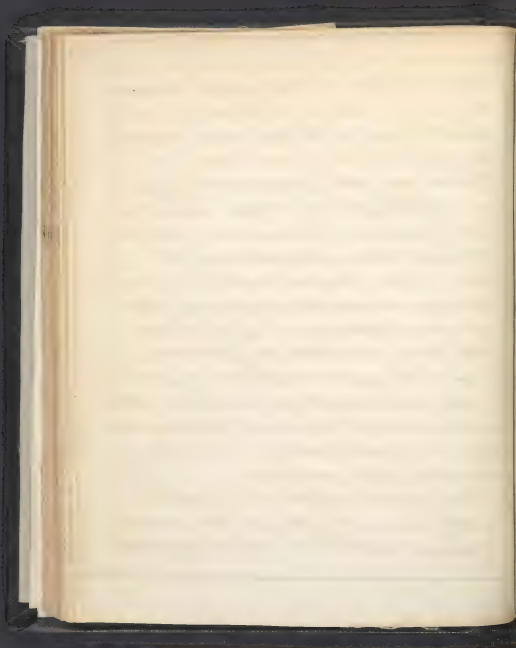
The Liver, in common with every other part of the living system, is subject to inflammation, which, by authors, has been divided into acute and Chronic. It is the former, that falls under our immediate consideration; of the latter, I shall say but little.

Acute Hepatitis may be denoted by inflammatory fever, tension and pain in the right Hypochondrium, sometimes punctant like the Pleurisy, but generally



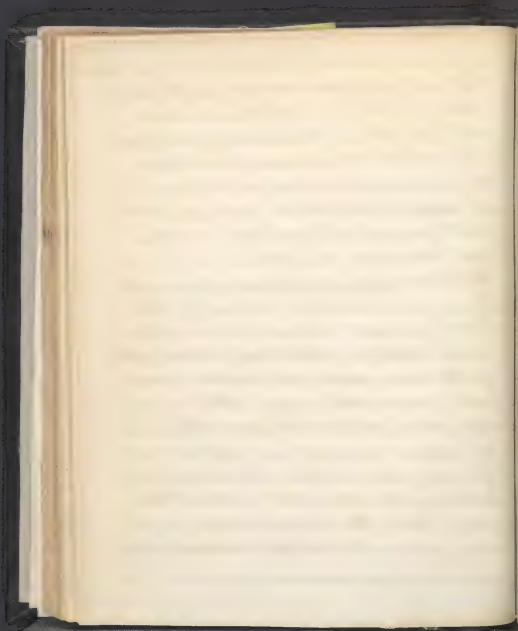
obtus; the pain extending to the Clavicle and top of the right Shoulder, difficult lying on the left Side, dyspnea, dry cough, vomiting, and hiccough; to this we may add, a jaundiced appearance of the Skin and eyes. The three latter symptoms, however, are not constant attendants upon inflammation of the Liver, as some practical writers have observed; but only occasionally accompany that disease, as experience has fully shown. To the above description may be added, a frequent, strong, and hard pulse, high coloured urine, a white dry tongue, sometimes yellow. In this disease, the bowels are generally constipated, the stools clearly indicating a obnoxious biliary secretion.

When jaundice appears, as a symptom in this disease, it is owing to the formation of Tumors in the Liver, which press on



The *Tractus communis choledochus*, the duct of the Gall bladder, the *Hepaticus* duct, or the *Porta biliaris*; thus preventing the passage of bile into the *Duodenum*, it is therefore absorbed, and produces, in proportion to the degree of obstruction, either jaundice or the jaundiced appearance, or sometimes observe in *Hepatitis*.

Dr. Cullen supposes inflammation of the Liver to find its origin, in some of the following causes: external violence, applied over the situation of the Liver; certain passions of the mind, exciting the arterial system; violent exercise, acting, upon the same principle; *Intermittent* and *Remittent* fevers, and the internal and external applications of cold; here we have the same cause producing, *Hepatitis*, that produces *Shenomenia*; hence, Dr. Cullen remarks, we in some instances have the two diseases joined



together, to these, he adds various solid con-  
 cretions, or collections of liquid matter,  
 I have here simply enumerated the different  
 causes of Hepatitis, without pretending to  
 determine which is the most frequent cause  
 of that disease, or to account for the  
 particular manner in which they act.  
 The principal indications to be fulfilled,  
 in the treatment of Acute Inflammation  
 of the Liver, are the reduction of pulsation  
 and excitement, and the restoration of the  
 natural healthy functions of that organ.  
 The remedy which naturally occurs to  
 us, as best calculated to answer the first  
 indication, is blood letting, carried to an  
 extent proportionate to the strength of  
 the pulse and violence of the disease.  
 As long, in fact, as the pain continues  
 in the side and the pulse is full and  
 strong, blood letting, says Dr Caldwell,





is the only remedy on which we can rely. Bleeding, however, should not constitute our only remedy, in <sup>this</sup> stage of the disease. Purgatives, in the mean while, should be resorted to freely, and boldly, the one on which we should place most confidence. To quicken its action, we may combine with it, Salap. The Saline cathartics are also excellent purgatives, when our object is to reduce vascular action, and should therefore not be neglected, in this state of excitement. Emmen may here be resorted to, with much benefit and relief to the patient. As auxiliary to these means, the Antimonial preparations come in as very useful. The best of which is the titrate of Potash in combination with Emetic Tartar, in the form of the well known titrated antimonial pow-



der. To answer the second indications, Leeching, Cupping, and after febrile <sup>action</sup> is sufficiently reduced, Blisters applied over the region of the Liver, more fail to facilitate the cure. Blisters, however, if resorted to at too early a period, and previous to the reduction of arterial excitement, always prove a source of considerable mischief.

Should these means prove inefficient, Mercury should be administered with a view to Salivation. If, when introduced into the system, it excites catharsis, it should be exhibited in combination with opium; the Pilules or Dover's powder are excellent forms. It is desirable, in this disease, that the mercurial action be quickly established, it ought therefore to be administered with a liberal hand. In speaking of the utility of Mercury, in Syphilis Dr. Chapman



remarks that "all other modes of treatment, in confirmed Hepatitis, are only feeble temporarys, or dangerous tamperings."

On these remedies, in conjunction with the strict observance of the antiphlogistic regimen, rests the treatment of Acute Hepatitis.

The symptoms which characterize the Acute, also distinguish Chronic Hepatitis, but in the latter disease, they are generally milder in degree and are also accompanied with more or less enlargement of the Liver.

The causes, of this kind of derangement in the Liver, are those which tend to diminish, or even the circulation of the Vena Portae, such, as Intermittent fever, Intemperance, excessive heat, and a sedentary, and indolent course of Life.

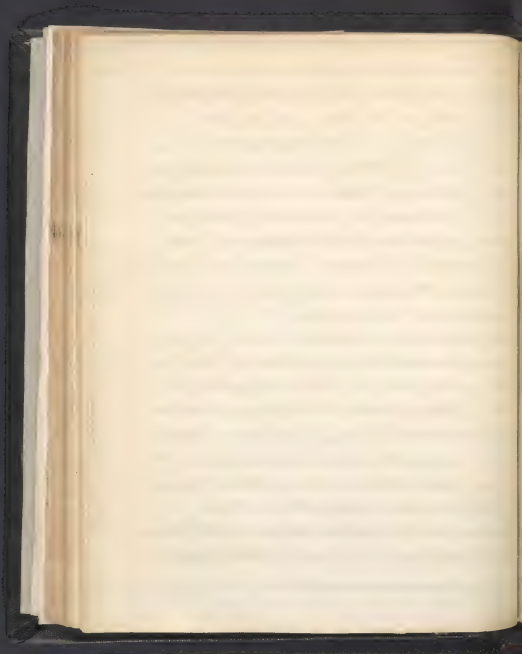
The treatment of this disease consists, in occasional bleedings, the application of cups, Issues, and blisters, to the right



Hypochondrium, the latter kept constantly open by the use of blistering ointment, and gentle mercurial Pylalism continued for some time. The Nitric acid is exhibited, in this affection of the Liver, with decided and superior advantage, particularly, when the system is too much debilitated or in other respects unfit, to undergo a mercurial course. Exercise, in this disease, is of essential service, and should not be neglected.

Hæmorrhoids and Ascites are more frequently connected with a deranged state of the Liver, than we are aware of. This is very intelligible on a little reflection. The Liver, in a Schirrus state, denies to the blood, from the lower Intestines, a free passage through that viscus, whence the veins from the Rectum become distended and enlarged, burst and discharge their contents.

The same obstruction to the passage of the blood through the Liver, giving rise to a putrefactional





distention of the blood vessels of the abdomen in general, produces an increased secretion of serum into that cavity; hinders the formation of coagula.† Dysentery and Cholera Morbus, primarily, arising from intestinal irritation, sooner or later extend itself to the Liver, involving the whole biliary apparatus. It is thus we have diseases, originally, intestinal, kept up for some time, by a diseased state of the Liver, Dyspepsia is not unfrequently, and supported or aggravated by hepatic disarrangement. At times, in like manner, we observe connection with a diseased state of the Liver. Thus might we go on, were it necessary, enumerating disease after disease, in some way connected with the Liver; but such accurs, we are persuaded, is entirely unnecessary. With Richardson we believe, "that a part belongs to the department of a Gland when it partakes in the motion affecting the latter, during the process of secretion or when it is employed in functions subservient to that of the Gland. Thus, one may say, that the Spleen and

† Caldwell's note to bottom page 507



most of the viscera of the abdomen are of the department of the Liver, since they furnish it with blood, on which to act. The Liver is also comprised in the sphere of activity of the Duodenum, since the distention of that Intestine irritates it, determines a more copious flow of its fluids, and a more abundant secretion of bile.

In the above remarks, we have clearly presented to view the extensive connection of the Liver and the consequent liability of that organ, to frequent derangement. If in truth, almost any of the abdominal viscera be made the subject of disease, they implicate, more or less, the organ now under consideration, which, from its importance in situation and function, sooner or later, brings into sympathy the whole system.



Passed March 9<sup>th</sup> 1834

W. L. H.

Dean

Acute Hepatitis

J. P. Lewis

Acute Hepatitis

